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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/776,883	02/06/2001	Katsuyuki Hirata	325772021800	8414

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EXAMINER

CARTER, TIA A

ART UNIT PAPER NUMBER

2626

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/776,883

Applicant(s)

HIRATA ET AL.

Examiner

Tia A Carter

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-18 is/are allowed.
- 6) ☒ Claim(s) 19-25, 29 and 30 is/are rejected.
- 7) ☒ Claim(s) 26-28 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5-1-01.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see remarks on pages 2-5, filed 9/29/04, with respect to 1-18 have been fully considered and are persuasive. The rejection of claims 1-18 has been withdrawn.
2. Applicant's arguments filed 9/29/04 regarding claims 19-25 and 29-30 have been fully considered but they are not persuasive. Applicant cites on page 7 of remarks that Yoshida is not reading an optical pattern. Examiner clearly disagrees, Yoshida teaches in Fig. 5, column 8, lines 45-67 and column 9, lines 1-27 that the LED chips are arranged in such manner that would emit specific patterns based on the varied wavelengths determined. Also, Applicant cites on page 7-8 of remarks that Yoshida fails to teach a plurality of patterns having gradations different from each other. Examiner disagrees wherein fig. 5, column 9, lines 10-16 cites varies wavelengths for the RGB LEDs, it is the Examiner understanding that different wavelengths values would also coincide with different gradations. Applicant, also, cites on page 2 of remarks that Yoshida's group of LEDs only forms a single light emission pattern, wherein the Applicant's invention produces a plurality of emitting light patterns. Examiner is unable to determine if Applicants limitations and remarks provided are true. Applicant failed to

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supply a visual representation of the LEDs in question and the plurality of light emissions. It is the Applicants responsibility to provide all support in regards to his/hers invention via written disclosure as well as visual. Examiner is unable to compare the prior art Yoshida with the Applicants drawing because there are not drawings disclosing the specific arrangement of LEDs as cited by Applicant.

Allowable Subject Matter

3. Claims 1-18 are allowed.
4. The following is a statement of reasons for the indication of allowable subject matter: The prior art searched and cited failed to teach the limitations set forth in claims 1-18.

Regarding claim 1 the allowable subject matter is as cited:

"a change rate of a light quantity distribution of the exposing device is calculated based on the light quantity measured for each light emission pattern".

Regarding claim 10 the allowable subject matter is as cited:

"a change rate of a light quantity distribution of the exposing device is calculated based on the light quantity measured for each light emission pattern".

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 19-21, 23-25, and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Yoshida (US. 6104509).

Regarding claim 19, Yoshida discloses a light quantity correction method for an exposing device provided with a plurality of light emitting elements (fig. 4, col. 8, lines 29-36) comprising steps:

Step 1 where an exposing device is allowed to emit light to form an optical pattern (fig. 4, col. 7, lines 37-45);

Step 2 where the optical pattern formed in the step 1 is read (fig. 4, col. 7, lines 26-29); and

Step 3 where a correction value of light quantity for each light emitting elements is calculated based on data read in the step 2 (fig. 4, col. 7, lines 26-29 and col. 8, lines 29-36),

Wherein the optical pattern is constituted by a plurality of patterns having gradations different from each other (fig. 7 and table 1, col. 15, lines 9-32).

Regarding claim 20, Yoshida discloses a light quantity correction method for exposing device according to claim 19, wherein the optical pattern is formed on a recording medium (fig. 1, col. 4, lines 27-32).

Regarding claim 21, Yoshida discloses a light quantity correction method for exposing device according to claim 19, wherein the optical pattern includes a mark to indicate positional information (fig. 5, col. 9, lines 39-42).

Regarding claim 23, Yoshida disclose an image forming device comprising:

An exposing device provided with a plurality of light emitting elements (fig. 5, col. 8, lines 45-56);

An image forming station for allowing the exposing device to emit light to form an optical pattern (fig. 5, col. 9, lines 23-34);

A reader for reading the optical pattern formed by the image forming station (fig. 1, col. 4, lines 27-32); and

A controller (202) for conducting process of calculating a correction value of light quantity for each light emitting element based on data read by the reader (fig. 6, col. 9, lines 37-44),

Wherein the optical pattern is constituted by a plurality of patterns having gradation different from each other (table 1, col. 15, lines 8-32).

Regarding claim 24, Yoshida discloses an image-forming device according to claim 23, wherein the image forming station forms the optical pattern on a recording medium (fig. 1, col. 4, lines 27-32).

Regarding claim 25, Yoshida discloses an image forming device according to claim 24, wherein the controller conducts process of eliminating moisture on the recording medium before forming the optical pattern (fig. 3, col. 7, lines 4-20).

Regarding claim 30, Yoshida discloses an image forming device according to claim 23, wherein the reader reads the optical pattern in a direction perpendicular to a direction in which the image forming station forms the optical pattern (fig. 4, col. 8, lines 1-6).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 22 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida (US. 6104509) in view of Maekawara et al. (US. 6121993).

Regarding claim 22, Yoshida discloses a light quantity correction method for the exposing device according to claim 19.

Yoshida **do not disclose** including a further step where data read in the step2 is subjected to smoothing

Maekawara et al. **disclose** including a further step where data read in the step2 is subjected to smoothing (figs. 10-11, col. 21, lines 35-42).

It would have been obvious to one skilled in the art at the time of the invention to modify Yoshida wherein image quality is corrected based on a time interval whereas the actual recording medium while forming the pattern produces frequency/noise patterns whereas the image may be shifted if a correction and/or filtering process is not implemented.

Regarding claim 29, Yoshida discloses an image forming device according to claim 23.

Yoshida **do not disclose** wherein the controller outputs the data read by the reader to the outside of the image forming device and obtained correction value of light quantity for each light emitting elements from the outside of the image forming device, instead of calculating the correction value based on the data read by the reader

Maekawara et al. **discloses** wherein the controller outputs the data read by the reader to the outside of the image forming device (fig. 1, col. 15, lines 20-27) and obtained correction value of light quantity for each light emitting elements from the

outside of the image forming device, instead of calculating the correction value based on the data read by the reader (fig. 9a, col. 19, lines 36-49).

It would have been obvious to one skilled in the art at the time of the invention to modify Yoshida wherein the image data can be obtained from other devices providing light quantity correction for more than just a recorded whereas there may be a plural device in which LED's emits light and need proper correction. This gives the invention multiple possibilities and extended advancement.

Claim Objections

1. Claims 26-28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Haraguchi et al. (US. 6525840), Naeshima et al. (US. 6330083), and Fujita (US. 6163331) are cited to show related art with respect to image forming apparatus with light quantity correction.

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tia A Carter whose telephone number is 703 - 306-5433. The examiner can normally be reached on M-F (7:00-3:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly A Williams can be reached on 703-305-4863. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

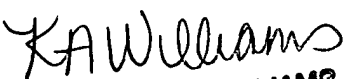
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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



TAC
2/17/2005

Tia A Carter
Examiner
Art Unit 2626



KIMBERLY WILLIAMS
SUPERVISORY PATENT EXAMINER